

ADVANCING/RETRACTING MECHANISM

ABSTRACT

An advancing/retracting mechanism having a pair of cams is disclosed. The advancing/retracting mechanism includes a first cam, a second cam, and a barrel. The
5 first cam includes an angled surface and a shoe, and the second cam includes an angled surface and a slider. The shoe engages with a helical surface in the barrel, and the slider engages with a straight surface in the barrel. The first cam travels a first distance along the longitudinal axis of the barrel from a first to a second state, and the second cam travels a second distance that is greater than the first distance along the
10 longitudinal axis of the barrel from the first to the second state.